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FARMING IN THE NORTH WEST OF CANADA



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FARMING
IN THE
NORTH WEST OF CANADA

ACTUAL RESULTS



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FARMING

IN THE

NORTH-WEST OF CANADA

ACTUAL RESULTS

The following extracts are taken at random in books and newspapers as they came at hand. They embrace a period of nearly thirty years and apply to various localities in the *prairie country*, which extends from Lake of the Woods to the Rocky Mountains, a distance of more than a thousand miles. They show in the most conclusive manner that *farming in the North West of Canada* offers advantages which can be found in no other parts of the world. When the immigrant arrives in that "paradise of fertility," all that he has to do is to *plough, sow and reap*. Ditching, draining and similar operations, so laborious and expensive in other farming countries, are unknown and useless in the prairies of the North-West, and still *the average yield of wheat is about thirty bushels per acre*.

Statement of Alexander Ross, in his book—The Red River Settlement: its rise, progress and present state, published in 1856

The hoe was at work and a small supply of seed-wheat procured from fort Alexander, on Winnipeg River, turned out ex-

ceedingly well. One of the settlers from the sowing, or rather planting of four quarts, reaped *twelve and a half bushels*.

The plough was tried with considerable success; *sixty-eight* returns from wheat, after the hoe, and *forty-four* from the plough, were the average reward of the husbandman.

No country can produce finer heifers, of one or two years old, than Red River; but after that age, they grow but little and the cows in particular are seldom large, which is attributed to their breeding too young.

All kinds of grain thrive well in the colony and grow to perfection; but wheat is the general crop raised and it is invariably sown in the spring.

I had a small park, which sowed ten bushels of grain. I got it manured and ploughed in the fall and ploughed it again before sowing in the spring. The season being favorable, I had 255 bushels in it. One of my neighbours tried a similar experiment and had, after six bushels sowing, 140 in return. A second field, sowing eight bushels, which had been left fallow for two years running, during which time it had been ploughed three different times, and then sown in drills, yielded for a first crop 280 bushels.

White clover is said to thrive well, but is little used. Timothy is the only artificial grass yet sown here with any degree of success, and it thrives exceedingly well. In truth, the present state of Red River with its abundance of waste lands and their luxuriance in natural grasses, leaves but little inducement for raising artificial grass of any kind. The natural grass is so easily got and so nutritive, that it is considered a mere waste of time and loss of labour to cultivate any of the foreign species.

Timothy thrives well, although but little of it is used, as the natural grass is esteemed fully as good and is produced without labour. Red River is particularly adapted for the raising of flocks and herds; and although cows do not generally give so much milk as we have seen at home and in Canada, or the United States, yet the milk is rich. A good cow well fed in the open plains will yield her pound of butter daily. The writer himself having tried the experiment, obtained from one of his best cows 24½ pounds in thirty-five days.

Nothing has yet been done here in the way of stall feeding for fattening cattle for the slaughter. Cattle have roamed about at large in the open plains till in the fall and are then killed, and yet many would be considered fat in any country. A cow seven years old belonging to the writer was killed some time ago and yielded 105 pounds of clean rendered tallow.

Statement of Hon. Donald Gunn, a practical farmer, in his evidence before a committee of the House of Assembly, in 1857. *See H.B.C. Report 1857, 381-3.*

The soil of Red River is composed of the *débris* of granite and limestone, with a large proportion of decayed vegetable matter. This soil is from 12 to 18 inches deep; under it is a thick bed of tenacious clay, of blueish color and nearly impervious to water. The west side of the river may be called prairie land, the east side are wooded lands. Our soil is extremely fertile and, when well cultivated, yields large crops of the finest wheat, weighing from 64 to 70 pounds per imperial bushel. The yield per acre is often as high as *sixty bushels* and has occasionally been known to exceed that; and, when the average returns fall below 40 * bushels to the acre, we are ready to complain of small returns. Some patches have been known to produce twenty successive crops of wheat, and that without fallow or manure; but in general we exact no more than five or six successive crops of wheat; then we put in one of barley and then fallow for one year.

These excessive crops do not exhaust the soil; but weed overcome all our efforts to keep them down, and therefore we are obliged to have recourse to the plough to destroy them. Barley grows well if the ground be not too rich, or the season too wet, when it throws up too much straw, lies down and does not meet. Barley weighs from 48 to 55 pounds per imperial bushel. Oats thrive well and give good returns. Maize, potatoes, beet-root, onions, carrots and turnips are cultivated and give profitable returns. The soil of this colony is admirable for growing hemp and flax. Horned cattle thrive well and are subject to no diseases. Horses prosper here as well as in any other country, after roaming at large, summer and winter, through the woods, where they keep in good condition.

Our climate and soil seem to be peculiarly adapted for or favorable to sheep. There are 28 years since their introduction into this settlement, and I have never seen nor heard of any sickness attacking them. When well fed, ewes will produce fleeces weighing from 2 to 3½ pounds; wethers produce fleeces much heavier. The wool is of good quality, though not very fine.

* These figures are a little higher than those given further on. The difference is easily accounted for by the fact that when Mr. Gunn gave his evidence, the choicest lands only were cultivated.

Statement of Professor Henry Youle Hind, in his Report on the exploration of the country between Lake Superior and the Red River settlement, printed by order of the Legislative Assembly, 1858.

Mr. Gowler farmed fifty acres in white and green crops, hay and pasture being furnished by the prairie. I had been previously informed of the extraordinary success of Mr. Gowler in growing wheat, but I found upon inquiry that the practice he employed was simply not to grow wheat after wheat; he had grown *fifty-six* measured bushels to the acre. His turnips (swedes) were magnificent; four of them weighed seventy-pounds, two weighed thirty-nine pounds and two others thirty-one. A portion of the potatoe crop was still in the ground; they far surpassed in quantity, quality and size, any I had ever seen before. Mr. Gowler very kindly turned them up out of the soil whenever I pointed out: I counted 13, 14 and 16 potatoes, averaging $3\frac{1}{2}$ inches in diameter, at each root. The potatoes were planted on the 1st June and were ready for eating on the 16th or 18th August. Indian corn succeeds well on Mr. Gowler's farm, and onions of rare dimensions were growing in his garden. He had had this year a splendid crop of melons, the seed being sowed in the open air at the end of May, and the fruit gathered about the 1st September. At the time of my visit, the melons had all been consumed, but I had several opportunities of tasting and enjoying this fruit, at Fort Garry and elsewhere, on the Assiniboine and Red River. In every instance they were grown in open air, without any artificial aid beyond weeding, from the time the seed was planted to the maturation of the fruit...

Potatoes are planted from 22nd to 26th May. The potatoe crop is here (at the indian mission) truly magnificent. I was favored with an inspection of the produce of a small field, afterwards visited, and certainly no finer or more plentiful returns could be desired. All the potatoes were perfectly clean and sound. With the permission of Mr. Cowley I took four potatoes which lay close at hand, on the top of a large heap, containing very many equalling in size those I had taken without special selection; when carefully weighed, they were found to average ten ounces each (10.1 ounces); a practical experiment proved them to be an excellent table variety.

In the large and well ordered gardens attached to the Upper and Lower Forts, every variety of vegetable, commonly grown in

Canada, was flourishing in the greatest luxuriance. Cauliflowers, Windsor beans, celery, beets, several varieties of cabbages, in fact every desirable vegetable was seen in profusion and of excellent growth. Lastly, and certainly not the least important in its relation to summer climate, melons of many varieties, I had the good fortune to see and eat in several parts of the settlement. In every case I inquired into, they were grown in the open air, without any assistance beyond throwing up the soil into the form of a little hill. The seed was planted in the earth in May, and the fruit gathered toward the end of August. From a small patch in the garden belonging to the very hospitable and generous Recorder and Governor of Assiniboine, James Johnston, Esq., no less than 103 melons were produced. At the time when I had the opportunity of seeing this feat of horticulture, fifty-six melons (a green flesh variety) had been gathered, and fifty-seven still remained, all of which had nearly reached maturity. I did not measure the bed, but to the best of my recollection it did not exceed twenty-five feet in length by ten or twelve in breadth. Mr. Mackenzie informed me that this year he raised from one seed thirty melons. On the 10th of August, one melon weighed, by actual measure, six pounds.

Wheat is the staple crop of Red River; its cultivation is so general, and the good quality of the grain so well and widely known, that very little need be said on that head. In favorable years, wheat ripens and is ready for the sickle in three months from the day of sowing. I think it very probable that new varieties from Canada or the New England States would ripen in less than three months, and this is the opinion of several of the best farmers in Red River. No fact, however, is more satisfactorily determined than the admirable adaptation of the climate and soil of Assiniboia to the culture of wheat. *Forty bushels to the acre is a common return on new land*, and I have stated that Mr. Gowler has obtained fifty-six bushels to the acre, without the introduction of any artifice beyond deep land furrows to keep the rich vegetable mould of the prairie dry.

Statement of Honorable John Sutherland in his evidence before a committee of the House of Commons of Canada, 3rd of April 1876.

Honorable JOHN SUTHERLAND, Senator, of Kildonan, Manitoba, appeared before the Committee, and, in answer to questions, said:

I have been in the the North-West all my life. I was born within the corporation of Winnipeg. My age is fifty-three years. *I am a practical farmer.*

From my long experience there, and from what I have seen in other Provinces. I have come to the conclusion that the soil, climate and other natural advantages of Manitoba are conducive to successful farming, and that a poor man can more easily make a living there than in other parts of the Dominion.

The usual depth of alluvial deposit on the prairie is about two and a half feet, and on bottomlands from two and a half to twenty feet. The natural grasses are very nutritious, and cattle can be wintered without any coarse grain, neither is it customary to feed any grain except to milk cows or stall-fed animals.

The usual yield of prairie grass when cut into hay is an average of from three to four tons per acre. It usually grows about five or six feet high, and, although coarse, is very nutritious.

I consider the North-West as very well adapted for dairy purposes, as we have many miles of natural meadows throughout the country, and hay can be cut and cured for about \$1 per ton. We have five or six varieties of grasses that are good and well adapted for stock feeding, while a few others are not so suitable.

The average yield and prices of grain are as follows :—

| | | |
|---------|----------------------------|---------------|
| Wheat, | about 30 bushels per acre, | price \$1.00. |
| Oats, | “ 40 “ “ | 30c. to 40c. |
| Barley. | “ 35 “ “ | 60c. to 70c. |
| Peas, | “ 50 “ “ | 60c. to 70c. |

The soil and climate are well adapted for growing root crops. Our potatoes are pronounced the best in the world. Indian corn is not extensively cultivated, and I think the large kind could not be cultivated to advantage, but the smaller kind might, and I think could be profitably grown.

It is customary to plough in the fall, but I have generally found it necessary to cultivate the soil in the spring before sowing, to prevent the growth of weeds.

I consider Manitoba adapted to sheep-raising, and from my experience I have found it profitable.

I have raised sixty bushels of spring wheat per acre, weighing sixty-six pounds per bushel, the land having been measured and the grain weighed carefully. I have also received reliable information to the effect that seventy (70) bushels of wheat have been produced from one bushel sown.

**Statement of Mr Jacob Y. Shantz, in his Narrative
of a Journey to Manitoba, in the fall of 1872.**

Here (at High Bluffs, on the Assiniboine) we staid at a farm belonging to a Mr. Allcock, an Englishman, who came here from Ontario three years ago. He showed us as fine a sample of spring wheat as I had ever seen, and told us that he had harvested *40 bushels to the acre*. He also exhibited a splendid sample of oats, flax seed, potatoes, turnips, cabbage and other vegetables.

We next visited Messrs. Grant and MacKenzie, whose farms lie about eight miles distant from Portage-la-Prairie, both of whom came from the Province of Ontario. Mr. Grant showed us sample of wheat which had turned out *30 bushels to the acre*, and some very fine oats. His potatoes also were of a very large size and superior quality, such as I have never seen surpassed. Mr. MacKenzie's wheat yielded *32 bushels to the acre*. He also showed us about 100 bushels of onions, measuring from *two to five and a half inches in diameter*. His turnips also were of a very large size, of which *three would weigh 60 lbs.* He stated that he had taken *1,200 bushels of potatoes off of four and three quarter acres of land*—prairie land broken up, and the potatoes ploughed under.

**Statement of James W. Taylor, American Consul
at Winnipeg.**

United States Consulate.

Winnipeg, B. N. A., Sept. 11, 1872.

SIR.—In response to your communication, requesting samples of the agricultural products of Manitoba for exhibition at the Minnesota State fair, I forward specimen of the wheat crop of 1871...

I send one-third bushel spring wheat from the farm of John Matheson, in Kildonan (the Scotch parish), four miles North of Winnipeg, which is mainly the "English." A third variety of spring wheat may be termed "Minnesota spring," the seed being sent by Mr. N. W. Kitson to Hon. James McKay in the winter of 1865. *one and a quarter bushel* of which in 1869 *produced 44 bushels* on one acre and has since averaged 30 bushels per acre for field cultivation.

I invite your particular attention to the specimen of "Fultz Winter," grown in St. Boniface, by Mr. Jean Mayer, from seed furnished me by Mr. Fred. Watts, United States Commissioner

of Agriculture. It was sown October 2, 1871, and harvested August 10, 1872. When the snow disappeared this spring the plants were barely visible, but they came to great perfection, and *the yield was at the extraordinary rate of 72 bushels per acre.* Results signally remarkable attended the cultivation of the "Fultz" by Hon. James McKay, of St. James Parish and Mr. John Matheson.

The above statement is confirmed as follows by the Ven. Archdeacon McLean :

In reference to the letter of Jas. W. Taylor, Esq., U. S. Consul at Winnipeg, on the subject of Manitoba wheat, I beg to say that the statements contained in it relative to the average yield per acre, agree fully with the results of my own observation during nearly a seven years residence in Manitoba. *There is no doubt at all that forty bushels of wheat per acre can be got in Manitoba, with ordinary care in farming.* My observations have reference only to spring wheat. I have not seen any efforts made to cultivate fall wheat, although I know no reason why they should not be successful.

With regard to ordinary kitchen vegetables, I do not think it possible to surpass the products of Manitoba.

Let me take the opportunity of reminding you that Manitoba is after all but a very small portion of the Great Fertile Belt of our Dominion.

The valley of the Upper Assiniboine with those of its affluents, the Rapid River, or Little Saskatchewan, the Shell River, the Swan and other rivers—and the valley of the Saskatchewan—stretching westward to the Rocky Mountains, contain millions upon millions of acres of soil as rich as that of the best in Manitoba, with a magnificent climate and every requisite for securing the health and material prosperity of a vast population....

JOHN McLEAN, D. D., D. C. L.

Archdeacon of Manitoba.

Statement of Mr Kenneth Campbell, of Manitoba.

The following questions and answers contain a report of the experience of Mr. Kenneth Mackenzie, *a farmer*, who emigrated from the Province of Ontario and settled in Manitoba. Mr. Mackenzie wrote the answers in 1873, to questions sent to him to obtain the information he has given :—

Question.—How long have you been a resident of Manitoba ?

Answer.—Four years.

Q. From what part of Ontario or the old country did you come?

A. Scotland, in 1842, then twenty years of age; lived in Puslinch, County of Wellington, twenty years.

Q. How many acres of land have you under cultivation at the present time?

A. One hundred and forty under crop, and about sixty more broken this summer. We plough the first breaking two inches deep, and the next spring or fall plough it a second time, and turn up two inches more.

Q. Is it broken from bush or prairie land?

A. Prairie.

Q. What is the quality of the soil, and of what does it consist?

A. Around Fort Garry to Poplar Point rather clayey with rich alluvial soil above; from Poplar Point west, clay loam with fine alluvial soil above, but in several places sand loam. There are to the south-west of here places too sandy for good farming land.

Q. Do you consider it good agricultural productive soil?

A. I never saw better, except that which is too sandy. There are settlers north-west from here for fully thirty miles, and although newly settled, they have good, fair crops, and no grasshoppers.

Q. Is prairie hard to break?

A. When the summer is wet or moist I would sooner break it than old spear grass sod, as we do not require to break so deep.

Q. What month do you consider best to break it in?

A. June and July, but earlier will do if you have time, as later does not answer so well.

Q. What kind of a plough do you use for breaking?

A. American, made by John Deen Moline, but other Americans make good breaking ploughs — light with gauge wheel in front, and revolving contermould boards and coulter and shear, all steel. No use for any other material here in ploughs but steel. The soil is rich and very adhesive, and even to steel it will stick a little in wet weather, more so after it is broken and cultivated.

Q. What kind, and whose make, of a plough do you consider best adapted both for breaking and after ploughing?

A. The American ploughs answer for both at present. I have a Canadian plough which does very well, but I think a good light Canadian, all steel, or even glass mould-board, would be better after the land begins to be old or long broken. We cannot go deep enough with the American ploughs when land is getting old and needy.

Q. How many horses or oxen do you use with each plough when breaking the prairie?

A. On a twelve-inch breaker, we use one pair horses, or one yoke oxen. When sixteen-inch, we use three horses or two yoke oxen. I prefer twelve-inch ploughs to larger ones.

Q. How many acres will a good team break in a day ?

A. About one acre is a fair day's work, *i. e.*, day after day. Some of course, will do more. The large plough and more teams will break one and a half acres.

Q. How many ploughings do you give the land before cropping, and at what time ?

A. Two ploughings for first crop answers best, *i. e.*, one light or 2 inch in summer, and then 2 inches more, stirred up, next spring ; we plough both times same way, and not to cross the first breaking. I have raised potatoes and turnips last year on first breaking ; had a fair crop, but would not like to depend on it if the season was dry.

Q. What crops do you grow most extensively ?

A. This year, spring wheat. 90 acres, barley. 30 acres, oats. 1 acre, peas, 8 acres, rye, 1 acre, flax. $\frac{1}{2}$ acre, potatoes, 6 acres ; the rest, roots of various kinds, and clover and timothy.

Q. What kinds of fall wheat, if any, do you grow ?

A. I have tried fall wheat, but do not consider it a profitable crop to raise here at present.

Q. What kinds of spring wheat do you grow ?

A. Golden Drop, Glasgow or Fife, and a little Rio Grande, I think it is called.

Q. How many bushels do you sow per acre ?

A. About 2 bushels per acre.

Q. What is the average yield per acre, one year with the other ?

A. *Fully 30 bushels ; I have had over 40.*

Q. Does Indian corn grow well, and yield a good crop ?

A. It does not mature very well. They have a small kind that ripens, but I do not like it.

Q. What kind of barley do you grow ?

A. Common 4 rowed, but think any variety will do well.

Q. How many bushels do you sow per acre ?

A. About 2 bushels.

Q. What is the average yield per acre ?

A. About 35 bushels, but I have seen over 50 per acre.

Q. What kind of peas do you grow ?

A. Russian blue and small white peas.

Q. How many bushels do you sow per acre ?

A. A little over 2.

Q. What is the average yield ?

A. I think this year about 20 or 25 bushels per acre; my land being new till this year, they did not do so well.

Q. What kind of oats do you grow ?

A. Black oats.

Q. How many bushels do you sow per acre ?

A. Two bushels.

Q. What is the average yield of bushels ?

A. I have but little, but I see fields from here to Poplar Point, I think will yield from 45 to 60 per acre.

Q. Do timothy and clover grow successfully ?

A. I have had both do well ; but timothy seems to do best.

Q. Do rye and flax grow successfully ?

A. Rye is a fair crop, and flax I never saw better.

Q. How are the soil and climate suited to growing root crops ?

A. All kinds of roots and vegetables that I have raised each year have done very well.

Q. Are those crops troubled with flies and insects as in Ontario ?

A. I have heard some complain of grubs, but have not suffered any by them on my crops, and I have sown turnips in May and they did well, and all through June, and no flies to hurt.

Q. Have you much rain during spring ?

A. Very little till May, June and July.

Q. What time does the frost leave the ground ?

A. About the 20th of April ; in some places it may be longer.

Q. Have you much frost after growth commences ?

A. I have seen a little in May, but I have not had any of my crops injured by frost since I came to Manitoba.

Q. How soon may ploughing and sowing be done ?

A. You may sow as soon as the ground is black or snow off. The frost was not three inches out when I sowed my first wheat ; I have it stacked now and a good crop.

Q. Is the summer different from ours in Ontario ?

A. Generally rather drier and vegetation more rapid.

Q. Have you showers during May, June and July, and have you heavy dews at night ?

A. Yes.

Q. Is growth as rapid as in Ontario ?

A. I think more so.

Q. Have you any summer frosts ?

A. None whatever since I have been here to injure crops.

Q. When do you generally cut your hay ?

A. From 15th July to 15th September.

Q. Does wheat, barley, and oats harvest commence later or earlier than in Ontario ?

A. Later ; generally about first week in August.

Q. Is the Fall early, wet or dry ?

A. Early ; generally dry.

Q. What date do frosts generally commence ?

A. First of the season, about 8th of 10th September, but fine weather after.

Q. When does the winter commence ; how soon is the ground frozen, and when does snow fall ?

A. Generally frozen about 10th or 12th November ; snow about 1st December. Some seasons are earlier ; others later.

Q. Have you deep snow earlier in or during the winter ?

A. First three winters snow would average from 16 to 20 inches ; last winter 10 inches. The frost is generally a steady freeze.

Q. Have you many severe drifting snow storms ?

A. Not any more than in Ontario, generally ; last season none, but that is an exception.

Q. Have you wood convenient, and what kind ?

A. From two or three miles ; greater part poplar, but some oak and white ash, and small ash leaf maple.

Q. How do you fence your fields ; with rails, wire, or sods ?

A. With rails.

Q. Have you a hay meadow convenient ?

A. About two miles off I have a large one of my own.

What grass grown in Ontario does prairie grass, cut for hay, most resemble ?

A. Beaver meadow hay, only ours here, I think better, and more variety.

Q. Does it make good hay, and do cattle and horses feed well on it ?

A. It makes good hay for cattle, and they feed well on it, but I do not think it near so good for horses as timothy hay.

Q. What is the average yield in tons to the acre ?

A. From one ton to two and a half tons ; different seasons and different grasses vary a good deal.

Q. To what height does grass on the open prairie generally grow ?

A. On hard, dry prairies not over ten inches, but on hay meadows I have seen four feet.

Q. Is it as pasture equal to our timothy and clover in Ontario ?

A. No, it is much thinner, and does not start so readily as clover, when eaten or cropped.

Q. Do the grasshoppers at any time destroy this grass, or can it at all times be relied upon as pasture?

A. They do a little cropping when very bad, but not, to my knowledge, to destroy it for hay or feed.

Q. How often do the settlers fire the prairie, and are your crops ever endangered by such fires?

A. There is a law against setting out prairie fires. I have not suffered any by them. I plough a few furrows around my fields and fences.

Q. Is it necessary to burn the grass on the prairie every fall in order to have a good growth the following year?

A. Not at all.

Q. Have you tried any fruit trees, if so, how have they done?

A. I have a few apple trees from seed, not well attended to, three years old. I do not think it very good for apples or pears, unless we have a very hardy kind; Siberian will do wild. Plums are very good, and likewise wild grapes, though small, grow finely on the banks of our streams, and better hops I never saw than grow here wild. We use them for our bread rising. Currants, raspberries and strawberries grow wild quite abundantly. I think the growth of apple trees too rapid, and wood does not ripen, the soil being rather rich, and not much shelter in general.

Q. How do you think the country is situated for dairy, cheese and butter making.

A. Very well, just the thing required.

Q. Have you always a ready market for your produce?

A. Can sell nearly all I raise at the door.

All the land around here, say from 30 miles west, *i. e.* third crossing of White Mud or Palestine River, to say 25 miles east, or Poplar Point, is rapidly filling up, especially this summer, but plenty is to be had all the way westward to the Rocky Mountains. I think few countries in the world are superior to ours for agricultural purposes, and, although the winter is hard and long, cattle, if provided for, thrive well. I wintered 91 head last winter, and lost none, all turning out well in the spring. Most of them had only rough open sheds for shelter, and ran loose. We have none of the wet sleet in spring and fall that hurt cattle elsewhere. We are now stacking our grain, and I think my *average will be fully 36 bushels per acre all round*; last year *I had 32 bushels per acre*. I raised about 300 bushels of onions last year. I expect fully as good a crop this year.

I again say bring fewer horses into the country, but as much other stock and implements as possible. First-class murch har-

vesters, or machines which will employ two men binding and of the most improved make, are wanted. I have two combined ones, made by Sanger & Co., Hamilton, which answer well, but those that will cut wider and quicker are required. There are no hills, stumps, or stones to trouble us, and I have not a single rood lodged this year, although my crops are very heavy. Straw is generally still here, and not apt to lodge. This year we have excellent crops of potatoes, and a neighbour of mine, Mr. Hugh Grant, yesterday, dug an early rose potato, *weighing over two pounds*, and not then full grown.

I have not seen grain or other crops in either Minnesota or Dakota to equal ours in Manitoba. I have been in those States in all seasons of the year, and have friends farming in Minnesota, who are desirous, if they can sell out, of coming here. I have seen people, newly arrived from the old country, grumble for a time, and afterwards you could not induce them to go back. Some that did go back soon returned. I have heard of some faint-hearted Canadians who, frightened with tales of grasshoppers and other drawbacks, returned without even examining the country, but I think, we are well rid of such a class. We have a large increase this year, principally from Canada, and I think they are likely to prove good settlers.

Report of Mr John P. Sheldon, professor of agriculture at the Wilts and Hants Agricultural College, Downton Salisbury, England, on his visit to Manitoba, in the fall of 1879.

The Province of Manitoba, so far as I saw it, is, as a rule, flat, wanting in trees, and, consequently, somewhat dreary-looking; but in many parts *the land is of striking richness*. I was up there in time to see the latter part of the harvesting, and I was certainly struck with the excellent crops of wheat and oats which were grown with the crudest cultivation.

On the day after my arrival, September 3rd, I saw a new string binder at work in a crop of wheat in the Kildonan settlement, near Winnipeg: it was a very nice even crop, *and would average, say, 25 bushels per acre of grain.*, whose quality was very good; the wheat was the "Scotch Fife" variety, not a heavy-headed kind, but it was a nice, even crop, the straw rather short and weak, but clear and bright, and the grain was plump, well-fed, bright, and fit for the mill at once. This crop was sown on the 22nd of May, on first prairie sod—that is, on prairie land just then ploughed up for the first time—and as such sod is very tough

at first, it may be imagined that the surface of the field was rough, and that the seed had been imperfectly covered ; yet the seed was sown and the crop dead ripe within a period of 15 weeks. It is, however, no uncommon thing for wheat to be twice in the bag within 90 days—that is, sown, harvested and thrashed within that period. I saw also a crop of oats which was sown at intervals, as the land was ploughed, from the 7th to the 17th of June ; the oats were the black tartarian variety, and though not ripe when I saw it, I should say *the crop would reach 45 bushels per acre*. It was a strong, well headed crop, and the oats promised to be a good sample. The crop, too, was on the first prairie sod, on a farm belonging to Mr. Ross, of Winnipeg, but some ten or twelve miles away from the city.

Land increases rapidly in value near to the city. For this self-same farm Mr. Ross paid \$367 ; now he wants \$3,000 for it. It is 240 acres in extent, and the owner has put up a small house and a building or two on it, besides breaking up about half of the land.

The soil of Manitoba is a purely vegetable loam, black as ink, and full of organic matter, in some places many feet thick, and resting on the alluvial drift of the Red and Assiniboine Rivers. It is, of course, extremely rich in the chief elements of plants-food, and cannot easily be exhausted ; the farmers know this, so they take all they can out of it in the shortest possible time, and return nothing whatever to it in the form of manure. By turning up an inch or two of fresh soil now and again, the fertility of the surface is renewed, and the same exhaustive system of growing wheat, year by year, may be pursued for a long period with impunity. It is true, in fact, that for several of the first years, at all events, manuring the soil would do much more harm than good ; and, until an Act was passed to prevent it, *the farmers were in the habit of getting their litter and manure out of the way by sleighing it out on the ice of the frozen rivers in winter, to be carried away somewhere when springtime and floods come, and the ice broken up ; now they leave it to rot in heaps, outside the stables, and find it an easier task to remove the stable rather than the manure, when the latter becomes unpleasently plentiful.*

In course of time it is probable that the manure will need to be put to its legitimate use of improving an exhausted soil, or maintaining the fertility of a rich one. At a still later period the operation of subsoiling will bring up new earth from below, and there does not appear to be any probability that the better soils of the Province will ever become sterile, providing that the farmers

make use of the means they will always have at hand for keeping them up to the mark. At present, however, *these rich wheat soils do not need improving ; they are rich enough for years to come*, and in some cases too rich for the welfare of the crop, much of the *straw*, therefore, is valueless, and really a cumber to the farmer.

It must not be supposed that the soil of Manitoba is fit only for wheat and oats. The wild grasses, it is true, are very coarse in character, and there are many weeds and worthless plants among them, yet cattle flourish on these immense plants of prairie grass. The "prairie meadows" are generally damp lands, situated near the swamps. The Province is not adapted to grow maize ; it is too far north for that : but it will grow garden vegetables very well, and turnips and potatoes, beans and peas, in the fields with complete success, while such "tame" grasses, as timothy and the rye grasses, and also red and white clover, grow satisfactorily on land that is at all decently cultivated.

Outside the city of Winnipeg I saw a large market garden, run by a Yorkshire man named Longbottom, in which very large crops of onions, potatoes, carrots, peas, beans, *tomatoes*, celery, and a hundred other things, were grown in a rough-and-ready sort of a way, but very profitably. There is a good market in Winnipeg for all kinds of garden stuff, and the earliest sorts command very high prices, so that our Yorkshire friend, as I was told on the best authority, is reaping a rich reward of his skill and industry.

**Report of Mr Hugh McLean, Rhu, Tarbert, N. B.,
the delegate of the Kingtyre Agricultural Society,
on his visit to Manitoba in 1879**

The following is the experience of Mr. McCorquedale, Headmngly :

We left Braiquish, Argyleshire, in 1853, for Canada. Bought 100 acres... in the township of Greenock, back of Kincardine (in Ontario). He got on very well there. Two of his sons and himself, three years ago, came to Manitoba to see the country. It pleased him so well that he did not return. During the first year he looked out for a suitable place and purchased one 320 acres for himself and one of 320 for his son, in the North of the Province.

The following is a statement by Colin, his son, of the capabilities of the land presently farmed by his father.

Wheat (2 bushels sown per acre) produced 35 bushels. The wheat is sown in spring. Fall wheat is not generally sown in

Manitoba, but a test has been made, and it has succeeded. Reaping commences in August. The land is ploughed right up that same fall, when wheat is sown again in spring in succession for years. Weight, 64 lbs. never less than 60 lbs. per bushel.

“ Oats average 75 bushels per acre, but it is not unusual to take 100 bushels off. Sow $2\frac{1}{2}$ to 3 bushels per acre. Oats weigh 34 lbs.

“ Barley does well. Sow 2 bushels per acre, return 60 bushels.

“ Potatoes—3 bushels planted produced 87 bushels; 400 bushels have been raised per acre, but not on his father's farm.

“ Turnips do well.

“ Indian corn does not ripen. Farmers cut it green, and it makes an excellent feed.

“ Cabbage, carrots, lettuces, parsnips, cucumbers, melons, squashes, etc., do well.

“ Have not yet grown apples. Old settlers have grown them.

We sojourned with Mr. Joseph Welis Johnstone (on the Boyne) who came from county Oxford, Ontario, in 1870, and settled on his farm. Since he came to Manitoba *his wheat has averaged 32 bushels per acre, but he has thrashed it at 52 bushels and at 60 bushels*, and five years ago at 48 bushels. Last year it * was 20 bushels. He sows one bushel and five pecks to the acre.

As to oats, he considers this the best of countries for oats, which weigh 42 lbs per bushel, and produce 70 bushels per acre. He has known, at Hendingly, a field of 10 acres produce 1,010 bushels, or about 100 bushels per acre.

Barley weighs from 48 to 52 lbs., and an acre produce from 50 to 60 bushels.

The system he adopts is : Starts ploughing about 15th June, and breaks land till 15th July. Leaves it lying till following fall. This ploughing is as shallow as possible—say 2 inches—and from 12 to 14 inches broad. In the fall he backsets it—that is, ploughs it the same way, being 3 inches deep and 12 to 14 inches wide. He harrows it in spring, and sows it with broadest seeder. Has a 10 horse power thresher; charges $1\frac{1}{2}$ c. for threshing wheat; $3\frac{1}{4}$ for barley, and 3c. for oats. Sows timothy and white clover. Timothy is a splendid success; has one piece which he cut in July, and expects to cut it again before winter. Mangel-wurzel does well, and so do turnips; also onions, carrots, gooseberries, currants and rhubarb. Buckwheat grows well, so do cucumbers, melons, squashes and strawberries.

We started on the morrow for Nelsonville, but were overtaken by Mr. Inmann, of the Boyne, who owns 800 acres of land

there. Mr. Inman spoke of a blue flower that always indicated, by its presence, good water. He mentioned that he paid \$10 for 160 acres, and got 160 acres for pre-emption price. He bought scrip for the balance. He has 60 acres in crop.

Wheat will average 30 bushels per acre, 60 lbs.

Oats " 40 " 34 "

Barley " 40 " 48 "

Potatoes " 250 " 60 "

He stated that he does not make butter, but rears cattle. The price of wheat is \$1 per bushel; oats, 65c.; barley, 60c.; potatoes, 25c. in the fall and 50c. in the spring; butter 20c. Young cattle can be bought in the fall for from \$7 (£1 8s.) to \$10 (£2) per head. Hay can be made here, deducting expense, tear and wear, for \$1 (or 4s.) per ton. Two tons of hay, with some straw, will winter a yearling well.

Mr. Nelson, (of Nelsonville), founder of the town, stated that when searching for water and digging his well, which is the well from which the inhabitants obtain drinking water, the vegetable mould was 18 inches to three feet deep; then 3 to 4 feet of marly clay; then 5 feet of solid grey clay; then black soapstone. The water is generally found between the clay and soapstone. "If not successful," added Mr. Nelson, "try another place."

Wheat produces 20 to 30 bushels per acre. Weight p. b. 64 to 66 lbs.

Oats " 40 " 90 " " 48

Barley " 40 " 50 " " 50

Potatoes " 200 "

Mr. Nelson came to Manitoba in 1877. He had planted cucumbers, potatoes, cabbages—very weakly plants—on the 28th June, and they all came good.

Beets, turnips, and mangel-wurzel do well.

Nelsonville is a thriving little place, and the inhabitants are kindly. It is destined to be a place of considerable trade, as it is on the track to Turtle Mountain, which is fast settling up. Mr. Nelson showed me next day tomatoes sown on the 10th May, which promised to ripen. I took samples, but they did not keep. He showed me *cauliflowers*, estimated by him at 4 to 5 lbs. weight. Potatoes—early rose—keep till the new ones come again. Plant them from 1st May to 1st June. I took two samples, and one potatoe from a seed planted on 3rd July. When the hill was dug there were seventeen potatoes on it, the sample taken being the biggest. I also took an average onion.

**Report of Mr. R. H. B. P. Anderson, of Listowell,
county Kerry, Ireland on a visit to Manitoba
in 1879.**

June and July, and, in a wet year, part of August, is the time for breaking the prairie : the sap is well up in the grass, etc., which is easily killed by the summer heat when turned up, and the ground is wet, making easy ploughing. The sod is merely pared, the more lightly the better ; the furrow turned is about fifteen inches wide. In the autumn or spring the furrows are backset, the plough turning about three inches of soil. In the spring the seed is sown, often without further ploughing, and harrowed in ; as often as not, rolling is neglected. Wheat is sown from the 15th of April to the 15th of May, the earlier the better ; oats till the end of May, and barley till the end of June. I have seen barley doing well that was sown on the 10th of July. The quantity of seed per acre is about the same of each, viz., two bushels. Harvest begins in the middle of August ; potatoes, turnips, etc., can be sown till the 20th of June, and fall ploughing, the great secret of success, can be carried well into November. The hay harvest, in July, is a simple affair. Prairie hay costs about a dollar a ton by the time it is in the stack ; a crop can be raised on the turned-up sod, but except as a makeshift the first year, it ought not to be done, the yield is sure to be poor. The farming implements are all of the very best description, made with a view to the saving of labor. A man with a breaking-plough and a good team can break or backset one and a half or two acres per day, and with a gang-plough and four horses about double that quantity. With a self-binding reaping machine attended by two stookers, from twelve to fifteen acres can be cut, bound and stooked in a day. I have seen these machines do wonderfully clean work. Manure is of no value, and is either burned or carted to the nearest river (the Mennonites make fuel of it). It will be years before the land requires it, or indeed would bear it. I do not say that our high-class English and Scotch farming is at all necessary for success, but I am persuaded, and it is proved that care and skill are amply rewarded ; no farmer need fear failure in Manitoba. I have, among my notes, a list of fourteen men all getting on well, who told me that until they came to Manitoba, they never lived out of town.

Cattle, sheep and horses thrive well, and in spite of the long

winter, during which they must be housed. Stock raising is found very profitable, hay can be had in abundance, and cattle keep well on it. I see no reason why they could not be shipped to England from Manitoba when the Canadian Pacific Railway is finished (it will be finished between Winnipeg and the sea-ports of the Saint-Lawrence before the end of 1884.)

The soil varies much, as it is natural to suppose over so large a track; but as a rule it is a rich, black, vegetable mould, working very like clay—rich beyond imagination—and resting on a marly clay. The depth of the surface soil varies a good deal, in some places not more than ten or twelve inches, in others as many feet. I am informed that chemical analysis have proved the soil to be the best adapted of any in the world for the growth of wheat, and certainly practical experience bears this out. It is very easily worked, becoming as fine as powder. However, there are all descriptions of soil to be had here, from the heaviest clay to the lightest sandy loam.

Wheat, of course, is the principal product, barley next, and then oats. Indian corn (maize) does fairly in some places, but is not grown to any extent. Oats seem to ripen to fast, and while it yields a great number of bushels to the acre, is not up to the mark as regards quality. Potatoes are an excellent crop, both as regards quantity and quality (though I did meet some of a poor enough description); all roots grow to perfection. Among the grasses timothy and cocksfoot prove a success; clover yields a good return; lucerne and Hungarian grass thrive wonderfully. As regards the average yield I must say of this country as of Ontario, that it is absurd to st like an average. About twenty-five bushels is given as the average for wheat, but I have seen forty-five to the acre; six to eight tons is considered an ordinary crop of potatoes, with the most extraordinary rough cultivation. Of course, climate is a very important factor, but I have no hesitation in saying that any man who understands his business can secure in Manitoba heavier yields of any crop that will grow there than he can in this country, and with one half the labor and expense. The natural grass is wonderfully nutritious, and is excellent food for cattle and sheep.

Statement of Mr. James Riddell, formerly of Hunsdalee, Jedburgh, Scotland, now of Miami, Manitoba.

Wheat, at 75c. per bushel, would amply repay the grower in Manitoba, and, at present prices in London or Glasgow for Ame-

rican wheat, would leave a large margin for freight and other expenses.

I will here state the cost of raising wheat per acre on our own land for the years 1879 and 1880, likewise the average amount of produce for these two crops.

First, the cost, which I shall give at contract prices :—

| | | |
|---|------------|------|
| Ploughing..... | \$2 00 | |
| Seed..... | 0 90 | |
| Sowing and harrowing..... | 0 50 | |
| Harvesting { Reaping..... | \$0 65 | |
| { Binding..... | 0 85 | 2 95 |
| { Stooking..... | 0 35 | |
| { Carrying and stacking..... | 1 10 | |
| Threshing..... | 7 95 | |
| | <hr/> | |
| | \$ 8 05=£1 | 13 1 |
| Av. of crops for 1879-80, 28 b. p. acre at 75c. | 21 00=£4 | 6 3 |
| | <hr/> | |
| | \$12 95=£2 | 13 3 |

Cost of production per bushel, 1s. 3d., leaving a margin of nearly \$13 per acre.

This certainly is above an average yield for Manitoba at the present time, but I believe that with good management and fair seasons, the average will come up to this, or even more.

Cattle-rearing is likely to pay well, as it is attended with little expense. They keep their condition through the winter (where wind-brakes are provided) on marsh hay, and this can be had in abundance in almost any kind of season. It is cut in July or August, the earlier the better fodder it makes. The marshes are level, and mowing machines make good work in the cutting. The expense of making this hay does not exceed \$1 per ton, and the usual winter allowance per head of various ages is 2½ tons. At present, cattle are allowed to graze on any unfenced land during the summer, and find any amount of feed, such as wild tares, peas and grasses. The best season for cows to calve is about the end of April.

Extracts from the reports of the English and Scotch farmers, selected by the farmers in their respective districts, who went out to Manitoba in 1879 to report upon the country.

Mr. JAMES BIGGAR, of the Grange, Dalbeattie, says :—" We heard very different statements of the yield of wheat, varying from 25 to 40 bushels. McLean, a farmer near Portage, had 1,230 bushels of Fife wheat, off 40 acres. Another man, a native of Ross-shire, who was ploughing his own land, told us he had cropped it for seventeen years in succession, his last crop yielding 35 bushels par acre. Mr. Ryan, M. P., a good authority, said the average of wheat might safely be taken at 25 to 30 bushels, and of oats 60 bushels. * * * Next day we drove over Messrs. Riddle's farm; their wheat has averaged fully 30 bushels per acre."

Mr. GEORGE COWAN, Glenluce, Wigtown, says :—" Mr. Mackenzie's farm is at Burnside, about 9 miles from Portage-la-Prairie.... He favored me with his average for the seasons of 1877 and 1878, and his estimate for the present year. Wheat crop, 1877, 41 bushels, 1878, 36 bushels; this year (1879) he expects it to be close on 40 bushels, average weight 60 to 62 lbs., but he has grown it as high as 64 lbs. per bushel. Oats last year (1878) he had a yield of 88 bushels from two bushels of seed sown on one acre; this year (1879) his estimate is from 75 to 80 bushels per acre. Mr. Mackenzie also grows excellent root crops, his swede turnips averaging 30 to 35 tons; and potatoes without any care in cultivation, sometimes even not being moulded up, yield between 300 and 400 bushels of 60 lbs. Onions when cultivated, are also very prolific, yielding as much as 300 bushels par acre. Mangel also grows very heavy crops, but I did not see any on the ground."....

" We spent a short time on the farm of Mr. McBeth, and walked over a field which I was informed had been continuously under crop for fifty-four years * * * I was told it would average 28 or 30 bushels per acre."

Mr. R. W. GORDON, Annan, says :—" Wheat may safely be estimated to yield with reasonable cultivation 30 bushels of 60 lbs., and oats 60 bushels of 32 lbs."

Mr. LOGAN, Earlston, speaking of the yield about High Bluff, says :—" The land here has grown wheat for forty years in succession, yielding from 25 up to 40 bushels per acre..."

" We arrived at Portage on Saturday afternoon. * * * He told us he had grown good crops at an average of 32 bushels per acre of 60 lbs. weight."

Mr. SNOW, *Fountain Hall, Midlothian*, says :—“ I consider I keep safely within the mark when I say that, taking a good piece of land, it will produce 40 bushels the first year, and an average of 30 bushels for thirty years, without manure.”

Roots and vegetables raised by practical farmers.

W. H. J. Swain, of Morris, has produced 800 to 1000 bushels of turnips to the acre, and 60 bushels of beans has also been raised by him per acre.

S. C. Higginson, of Oakland,—has produced cabbages weighing 17½ lbs. each.

Allen Bell, of Portage-La-Prairie,—has had cabbages 45 inches around, and turnips weighing 25 pounds each.

Thos. B. Patterson,—has realized 40 tons of turnips to the acre, some of them weighing as much as 20 pounds each.

Robt. E. Mitchell, of Cook's Creek,—raised a squash of six weeks growth, measuring 5 feet 6 inches around the centre.

Wm. Moss, of High Bluff,—has produced carrots weighing 11 pounds each, and turnips measuring 36 inches in circumference.

James Airth, of Stonewall,—states that the common weight of turnips is twelve pounds each, and some of them have gone as high as thirty-two and a half pounds.

Isaac Casson, of Green Ridge,—has raised 270 bushels of onions to the acre.

John Geddes, of Kildonan,—states that he has raised 300 bushels of carrots and 800 bushels of turnips per acre.

John Kelly, of Morris,—has produced from 800 to 1000 bushels of turnips to the acre.

Joshua Appleyard, of Stonewall,—also states his crop of turnips to have been 1000 bushels per acre, the common weight being 12 lbs. each.

Ed. Scott, of Portage-La-Prairie,—raised 400 bushels of turnips from half an acre of land.

W. H. J. Swain, of Morris,—had citrons weighing 18 pounds each.

Francis Ogletree, of Portage-La-Prairie,—produced onions measuring 4 inches through the centre.

A. V. Beekstead, of Emerson,—gives his experience as follows :—

Mangel Wurzel weighing 27 lbs. each.

Beet “ 23 “

Cabbages “ 49 “

Onions each 1½ pounds in weight.

W. B. Hall, of Headingly,—has raised carrots 3 inches in diameter, beets weighing 20 pounds each, and gives the weight of his turnips generally at 12 pounds each.

Philip McKay, of Portage-La-Prairie,—took 200 bushels of turnips from one-quarter of an acre of land, some of them weighing 25 pounds each. He has produced carrots 4 inches in diameter and 14 inches long, has had cabbages measuring 26 inches in diameter solid head and four feet with the leaves on. His onions have measured 16 inches in circumference, and cauliflower heads 19 inches in diameter.

Jas. Lawrie and Bro., of Morris,—have produced turnips 30 inches in circumference, onions 14 inches and melons 30 inches. He had one squash which measured about the same size as an ordinary flour barrel.

James Owens of Pointe-du-Chêne,—had turnips 30 pounds each, onions 14 inches around, and cucumbers 18 inches long.

Neil Henderson, of Cook's Creek,—has raised 1,000 bushels of turnips to the acre, carrots 5 inches in diameter and 18 inches long, while his onions have frequently measured 5 inches through.

Jas. Bedford, of Emerson,—has raised 1,000 bushels of turnips to the acre.

It must be remembered, however, that none of the farmers mentioned above used any special cultivation to produce the results we have described, and out of nearly 200 reports which we have received from settlers concerning the growth of roots and vegetables in the Canadian North-West, not one has been unfavorable.

Reports on crops in Manitoba for 1882

(Condensed from the *Winnipeg Times*.)

The season was, upon the whole, an extremely favourable one. The spring was a late and, in many places, a wet one, so that seeding was delayed; while the fall, being remarkably dry, did not suit root crops, although of course it enabled the farmers to house their grain in fine condition. Rust is reported from only one point, viz., Reinland, near Emerson. At Mowbray, 90 miles from Emerson, there was a hailstorm on July 24, which seriously damaged the grain. Late and early frosts are reported from one or two points, but the crops throughout the Province at large did not suffer to any appreciable extent from that cause.

THE AVERAGE YIELD

of wheat at the 84 points heard from was a fraction short of 32

bushels per acre. The largest yield is reported at Millford, where 104 bushels were threshed off two acres. The smallest yield was in the Mowbray district, where the July hailstorm played havoc with crops of every kind. The yield of oats all over averaged 44 bushels per acre; barley, 30; roots ran from 250 to 500; and peas, where grown, from 20 to 25 bushels. Some flax seed was grown and the yield was a fair one. The average yield of potatoes was 274 bushels. The largest yield reported was at Selkirk, where 400 bushels were raised off half an acre of sod land at the first breaking. The hay crop was an exceedingly heavy one, and was well saved. An enormous area of new land was broken this year, ready for next year's cropping. Stock-raising, of course, is still in its infancy. In some of the older districts, however, the farmers are importing good breeds from Eastern Canada, and the richness of the prairie grass will enable them to turn out summer-fed stock at a minimum of cost. Agricultural machinery is coming into use all over; in one district 45 self-binders were at work in the field.

(From the "Toronto Globe")

The crops report covering as far west as Troy shows that the season on the whole has been extremely favourable. The spring was late, and in many places wet, so that seeding was delayed. The fall was remarkably dry, and did not suit roots, but the grain was housed splendidly. It is reported from Reinland, near Emerson, that the crops were damaged by hail on July 24 at Mowbray, 90 miles from Emerson. Late and early frosts are reported at a few points, but generally the crops did not suffer appreciably. The average yield of wheat is 32 bushels; oats, 44 bushels; barley, 30 bushels; roots, 250 to 500; peas, 20 to 25 bushels; and potatoes, at Selkirk, 400 bushels were gathered. Hay crops are heavy, much of the land being only broken and back-settled. Stock raising shows marked progress with the heavy importations of good breeds. Agricultural machinery is largely employed. In one district 45 self-binders were at work. The settlers almost everywhere complain of the difficulty in getting their crops to market.

(From the "Toronto Mail")

Grain crops and Cattle-raising at Battleford N.W.T.

From a Correspondent

BATTLEFORD, N. W. T., Sept. 12, 1882.—As we seldom see anything in your columns from this quarter of the North-West,

perhaps a short letter might not prove uninteresting to those of your readers who purpose turning their faces towards this, the new land of Promise. Until the present summer Battleford has been avoided by the great mass of emigrants, reports having been widely circulated that the land in its vicinity was of a most inferior character. The visit of the Governor-General last summer, and the letters of your own and the *Globe's* correspondent, went far to rectify this error. Interest once awakened, it was then only necessary to point the crops grown and to the fact that summer frosts are absolutely unknown in this section. The land, too, with the exception of a strip five miles long, and three wide at the confluence of the Battle and Saskatchewan rivers, was shown to be a rich loam, equal for farming purposes to any in the Territories. The result is that

SETTLERS HAVE COME IN THICK AND FAST.

until it is almost impossible to secure a claim within several miles of the town unless the Saskatchewan is crossed. The land on the north side of the Saskatchewan is even richer than that on the south, the only drawback being the absence of a ferry. This is obviated in part by using small boats, but in all probability a ferry will be established ere long. Both sides share in common an abundance of hay and firewood, the latter a much prized advantage in prairie country.

THE HARVEST

has now been gathered in. Reports from Edmonton, Prince Albert's Mission, and other settlements indicate that it has been a pronounced success. In this vicinity the weather was most propitious, no rain having fallen; the quality of grain is excellent and the yield magnificent. *Oats have averaged 55 bushels to the acre and barley 40 bushels*; wheat, what little was sown, *average 40 bushels*; potatoes are an unusually large crop.

Up to the present no one has established a grist mill here, which accounts for the small acreage of wheat. Mr. J. G. Oliver is erecting a saw mill about twenty-five miles above Battleford, on the Saskatchewan, so that next year there will be no difficulty in procuring lumber.

STOCK RAISING

has proved a decided success in this locality, though on a smaller scale than in the Bow river country. In the spring of last year Messrs. Wyld & Bourke brought in about seventy-five head of

cattle, wintering them on the north side of the Saskatchewan. The experiment succeeded so well that this year they brought in from the south almost as many more. Mr. Thomas Dewan, who has been in the country for several years, arrived lately with a large band of brood mares, and two thoroughbred stallions — Montana stock. As these winter out, requiring neither hay nor stables, and but little care, they cannot but prove a profitable investment.

Next summer the numerous steamers on the Saskatchewan will be able to bring through freight and settlers outfits much more cheaply than has been done heretofore. The railway, too, will have progressed considerably, so that the journey will be a mere trifle when compared with the past.

(From the Toronto "Globe").

FARMING IN MANITOBA

WHAT AN ENGLISH GENTLEMAN'S SON ACCOMPLISHED

RESULT OF TWO YEARS' OPERATIONS

Mr. William Hardie, of Sturgeon Creek, Man., is one of the eminently successful farmers in the Prairie Province, and the results of his operations are significant, as showing *what a gentleman's son, not brought up to the work*, may accomplish on a North-West farm. Mr. Hardie, who is a Manchester man, knew nothing of the business except what he had learned at an English agricultural college. Three years ago, says the *Winnipeg Sun*, he came out here and bought a farm of 500 acres at Sturgeon Creek. A small crop was put in the first season, but attention was mainly directed to putting up comfortable and commodious farm buildings. It was not till last year that he can be said to have commenced

HIS FIELD CAMPAIGNS

in earnest. Then during the spring, summer, and fall he had pretty constantly twelve men in his employ, and about half that number in the winter. One item in last year's returns was 6,000 bushels of potatoes, of which he sold a large quantity in the fall,

when prices had risen to the interesting height of \$2 per bushel. He stored away 4,000 bushels till the following spring, and then again he was in luck, for he got rid of this immense quantity at from \$2 to \$2 50 per bushel. That of itself was as nice a little operation as any agriculturist could fairly expect as the result of one season's operations in one branch of the farm. But his hay, too, proved a veritable bonanza. He put up 500 tons of it, and marketed the same in Winnipeg at from \$15 to \$30 per ton—the latter figure being realized in the spring. Sixty head of very fine cattle were kept further up the Assiniboine, where Mr. Hardie has a 1,200 acre farm. The cattle being bought for breeding purposes, scarcely any attention has been devoted to butter or milk, and, though the animals themselves will be sold at handsome profit now, Mr. Hardie thinks it best to retain them in pursuance of his original intention. He does not milk his cows, but allows each of them to bring up two calves—her own and another.

CATTLE IN WINTER

Mr. Hardie *does not stable his cattle in winter*. His plan is to build for them a shed on the river bank, in the shelter of a bush. Forming a quadrangle of his large stacks of straw, it proves convenient for sheltering and feeding purposes; and as this barrier to the wind and snow decreases, it is built up again by two of the hands detailed to haul and stack the straw. *The cattle wintered in this way, did remarkably well*. One man only was in constant attendance on them, the most important part of his duty being to keep the water-hole in the river free from ice and snow, so that the cattle could drink. The only thing done in the way of stabling any of the cattle was towards spring, when for a few weeks prior to calving the cows were put in. Owing to this precaution none of the calves were lost. During the winter Mr. Hardie put some of his men and teams into the woods and got out railway ties—an operation which, it is said, made satisfactory additions to the annual receipts. This year Mr. Hardie had in all four hundred acres under crop, sixty acres being in roots and the balance in grain. His root crops are principally potatoes, turnips, and carrots. He put ten acres under turnips.

A FINE ROOT CELLAR

is one of the things not to be met with on every farm, but Mr. Hardie has an exceptionally good one, the adaptability of which he has fully and fairly tested. On the banks of the Sturgeon

Creek he has one cellar which holds 6,000 bushels, and it is so well arranged that he can, contrary to general practice, go into it any day in the winter without damaging the roots. In fact it is entered almost every day in order to see that the temperature is just what is necessary. When it is too warm the ventilators are opened. When it is too cold the aid of a small stove in the cellar soon enables them to warm the air sufficiently. Last winter they had occasion to use the stove only five or six times, and then chiefly as a matter of precaution.

MANURING FOR FIELD ROOTS

While on this subject for roots, it may be stated that Mr. Hardie manures all the ground part under roots, and has found, to his satisfaction, that this process increases the yield by fully one-third. In the drills, when they are opened for potatoes, manure is first spread. Then the potatoes are planted and covered up. As are the other field roots, they are sown on land used for potatoes the year before, and in that way get the benefit of the manuring. The locality in which Mr. Hardie has settled, Sturgeon Creek, is one of the finest in the Province for agricultural purposes. He has had means to make a good start and push operations when needful. At one time last spring he was paying wages at the rate of thirty dollars a day.

(From the Toronto "Globe")

THE BELL FARM AT QU'APPELLE

56,000 ACRES UNDER ONE MANAGEMENT

The mammoth farm of the North-West is owned and operated by the Qu'Appelle Valley Farming Company. It comprises a tract ten miles square, which, after deducting the Hudson Bay Company's sections and the sections allotted for school purposes, leaves

A FIFTY-SIX THOUSAND ACRE FARM,

the largest farm in the world, owned by one company in one block. The land is situated on the old trail from Winnipeg to Fort Qu'Appelle, and the main buildings are just twenty-two miles in an almost direct line south of the Fort. The C. P. R. runs through the centre of this valuable tract, which is in reality one of the

"gilt-edged" pieces of the North-West, and a station to be known by the name of Indian Head is located near the centre. Here an interesting village is rapidly springing up. In taking up this land the Company entered into an agreement with the Government which it is presumed they intend and will be required to adhere to faithfully. They agreed to pay the Government \$1 25 per acre and to break 4,000 acres every year for five years—or in all twenty thousand acres. In addition to this the Company binds itself under penalty of forfeiture of the purchase money to place each year within the tract as tenants at least fifty families, and to spend within the five years \$600,000 in improvements and in working the farm. So far the work has been pushed vigorously; the Company evidently mean business, and having been generously dealt with by the Government, will avail themselves of all the advantages to make the undertaking a profitable one. Major Bell, who has sole management of the farm, originally came from Brockville. He was one of the proprietors of the noted Bell-Kelso farm in Minnesota, where he obtained the experience he possesses, and which fits him to operate an enterprise so vast. Having sold his Minnesota interest, he will devote his entire attention to the farm at Qu'Appelle, which, by the way, is a scheme of his own suggestion.

THE WORK BEGUN

The plan Major Bell intends to pursue to bring the extensive area of prairie land under cultivation, and the success of his work so far, show that he has thoroughly grasped the difficulties of the project and has no anticipation of failure. The Emerson *International* furnishes an interesting description of the operations up to the present time. Some extracts therefrom will doubtless be perused with interest by our readers. When the breaking outfit started for the big farm the Canada Pacific Railway was in operation only as far as Flat Creek, a point 200 miles east of its destination. The outfit, consisting of 120 yoke of oxen, 35 mules, and 16 teams of horses, attached to gang ploughs and waggons, and forming a train three miles in length, left Flat Creek in May, and, after encountering many obstacles and enduring many hardships in the way of fording and swimming swollen streams and floundering through almost impassable sloughs, the caravan finally reached the farm and commenced breaking about the 15th of June. At the time of the reporter's visit three thousand acres were under plough and the breakers were on their fourth thousand acres, which was expected to be under plough before the close of the season.

THE SOIL.

is a rich sandy loam, eighteen inches to two feet in depth, with clay subsoil, and is easily broken. Once broken it does not require "backsetting," as does the soil of the Red River Valley, but simply requires harrowing to be in shape for the reception of seed. The sight of the vast stretches of rich mellow loam turned up to the pulverizing rays of the sun would make the eyes of the average Ontario farmer bulge out with amazement. The simple statement "four thousand acres" gives little idea of the extent of the ploughed fields, but when one imagines a field two miles wide by three and one half miles long, then some idea is obtained of the size of the fields on the Bell Farm, by which title the place is now generally known. Take another comparison. Were the furrows in these four thousand acres stretched out in one continuous furrow it would reach a distance of 36,000 miles, or encircle the earth nearly one and a half times. Or were the land ploughed into a stretch twenty feet wide it would reach from Winnipeg to Montreal, *via* St. Paul and Chicago, a distance of 1,800 miles. The company proposes to break 7,000 acres next summer, and will have a force capable of breaking

ONE THOUSAND ACRES PER WEEK.

Oxen are chiefly employed in breaking, because they are most easily kept. Early in the season three yoke pulled a gang plough of two ploughs, cutting each a furrow fifteen inches wide. The season having been very dry, the sod has become tough, and five yoke are now required to pull a gang of two ploughs. It is a novel and interesting sight to see a number of the ploughs in line, five yoke of oxen to a plough, and the whole forming quite a caravan, converting the brown prairie into a sea of black wavelets, turning up a rod or more of sod at a "swath." The breaking force commence work at daylight and work till 11 o'clock a. m., when the oxen are turned out to grass and allowed to feed till 3 o'clock p. m., when the oxen are again put to work and kept at it till dark, the calculation being to cover

FOURTEEN MILES EACH DAY.

The oxen get no other feed except what they pick up on the prairie. Eighty yoke of oxen are employed in breaking at present, and in addition to these 35 mules and 34 horses are used in ploughing and other work. Next year only mules and horses will be employed, as a good supply of hay (400 tons) has been put up, and now that the railway is in operation oats can be obtained at a

comparatively low rate until next season's crop can be harvested. Major Bell's plans are comprehensive, and everything is done systematically. Besides himself there is a general superintendent of the farm, Mr. T. Rontledge, an Englishman, and a number of foremen. At present 100 men are employed in erecting buildings, breaking, &c. Handsome and substantial stone buildings are being erected. In the erection of his buildings Major Bell has struck an idea that can be adopted with profit by a great many settlers in the North-West. Scattered over the farm, always on the surface, are to be found a considerable number of hardheads, lime and sandstone. These stones supply the building material for the

NUMEROUS HOUSES AND STABLES

that are being erected on the farm, and "thus two birds are killed with one stone," so to speak—the farm is cleared of stones, and cheap building material is secured at the same time. The main buildings on the farm are located about a mile and a half north of the railway station. A large and substantial stable has been erected, and a handsome and substantial house is nearly completed. The stable is a model of strength and comfort. It is circular in shape and looks something like the round elevators one sees along the St. P., M., & M. Railway, only it is not so high and is more substantial, the stone walls being two feet thick. It contains 36 stalls and two box stalls. The floor is paved with cobble stone. Overhead is a loft with capacity for 150 tons of hay. In the centre of the upper story is a bin for oats, with storage capacity of 4,000 bushels. Major Bell has hit upon a

NOVEL AND ECONOMICAL PLAN

for roofing his buildings. He first sheets the rafters with common lumber and then paints the boards. Before the paint dries heavy ducking is stretched over the boards and tacked down, and this is then painted and sanded, making a tight and at the same time cheap roof. All the building material, except lumber, is obtained on the farm. The company have their own lime kiln and have this year burned 1,500 bushels. Next year they will commence the manufacture of brick. The

MAIN FARM RESIDENCE

is a substantial and handsome pile. The estimated cost of the building is \$8,000 though it could not be erected in any part of Manitoba for anything like that sum. The main portion of the building is 40 feet square, two full storeys, with a wing; also two

stories 24 x 50 feet in size. The upper portion of the wing furnishes sleeping accommodation for 20 farm hands, while below is the kitchen and a dining-room for the men. In the main building one side is divided into a parlor and dining-room, and the other into offices for the general manager and superintendent. The second story is divided into bedrooms. Underneath the main building is a fine cellar, extending the full size of the building. The residence is situated about 100 yards south of the stable. At the rear of the house an acre of ground has been ploughed for a garden, and Major Bell intends to have a garden that will astonish visitors to the farm, and show

WHAT NORTH-WEST SOIL CAN DO

Trees from the Lake of the Woods are to be used for the ornamentation of the road leading to the station. Near the barn is a blacksmith shop and at the rear of the house an ice-house—the latter to be filled the coming winter from two beautiful lakes located six miles south of the house. In addition to these, two large sheds for implements, located on each side of the barn and each 20 x 150 feet in size, are to be erected.

THE SYSTEM OF FARMING

to be followed is as follows :—It is proposed to divide the tract into farms of 200 acres each. On each farm a stone house and stable will be erected. A man with family will be put on each farm and will be paid \$35 per month and have house rent free. Will also be provided with fuel at cost. At the end of five years he will have the privilege of purchasing the farm he occupies if he wishes at a fair valuation. The farm houses are one story stone cottages, 25 x 30, plastered and nicely finished inside, and are erected at the astonishingly small cost of \$300. A number have already been erected and more will be put up before the season closes. When the place has been fully carried out there will be 200 houses, and all will be connected with the main office by telephone. Four deep coulees (in ordinary seasons they are creeks, though this year they are dry), traverse the farm at intervals of from one to two miles, and run northward and empty into the Qu'Appelle River, furnishing such a perfect system of drainage that the entire tract of 56,000 acres can be properly cultivated without doing 100 feet of ditching.

The company are closing up with the squatters and apprehend little further difficulty in settling with them.

When and how to reach Manitoba

ADVANTAGES OFFERED

Emigrants intending to settle in Manitoba should leave Great Britain so as to reach Manitoba during the first part of May or the month of August. If the settler reach Winnipeg in the early part of May, he may have time enough to go round to choose his land, purchase it and set to work in order to raise a crop the same year on the first breaking, that is on the first prairie sod which he turns, as late as the beginning of June. Wheat will grow on the first breaking, but oats and flax seed are better adapted to it. Large crops of oats are on the first breaking.

Settlers entering the Province in July, August or September have the most pleasant weather in which to go about, and pick out land for their farms. They will have time also to build their houses and prepare for the winter; also to prepare for the spring by doing a little fall ploughing. This mode of settling has greater comforts, but requires a little more means to live until the first crop comes.

The settler from Great Britain can buy a ticket at all the steamships offices direct to Winnipeg, either all rail by the Grand Trunk *via* Chicago and St. Paul, or *via* the CANADIAN PACIFIC RAILWAY and their line of Clyde built steamers, on lakes Huron and Superior, between Algoma Mills and Thunder Bay. This latter line has on all others the advantage of saving the settler from the formalities to be observed at the United States custom offices, when going either by Chicago or Duluth.

Settlers should not take with them heavy furniture or implements, as these can be purchased cheaply with special adaptation to the country in Manitoba; but clothing, bedding, etc., within the limit of 150 lbs. weight should be taken. Some settlers have foolishly attempted to take such things as stoves and stovespipes, which have cost more than they were worth. A settler should always see that this luggage goes with him. He should always be guided by the advice of the Canadian Government Agents. These are—Mr. Stafford at Québec; Mr. Graham at Duluth; Mr. Tétu at Emerson, and Mr. Hespeler at Winnipeg. These agents will assist in bonding luggage on entering the United States, or discharging bonds on reaching the Manitoba province line.

